W. H. Ranney's compliments.

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THE GRAND TRUNK RAILWAY OF CANADA;

BY

GENERAL M. BUTT HEWSON,
CIVIL ENGINEER.

TORONTO:
BELFORD BROTHERS, PUBLISHERS.
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GENERAL M. BUTT HEWSON,

CIVIL ENGINEER.

OFFERS his services to BONDHOLDERS *or* STOCKHOLDERS *in England anxious to obtain Professional Reports on the condition, working, or general merits, of particular Railways in Canada or the United States.*

Applications addressed to him on the subject to P. O. Box 1689, Toronto, Ontario, will receive his immediate attention.

PREFACE.

Civil Engineering in England received its tone from the days of George Hudson. Fostered into life by the original railway-*mania*, it held in contempt all considerations of the economical. The temper of the profession at home was shown by an associate of mine twenty-seven years ago, on the Great Munster Railway of Ireland, who met my remark that he could cross the River Deel half a mile up-stream by an ordinary bridge, with the reply that he had selected the crossing lower down in order that the construction should be of a magnificence to give him "immortality!" Educated in that school, my views had, it is true, undergone sobering by subsequent service as an Engineer under the Imperial Government; but had left me when I left home to practice in the United States, a great deal to learn and to unlearn.

The limit of means in construction addressed itself to me for the first time in America. It pressed itself there upon my acceptance as even the controlling element in railway design. Rivalries of the carrying-trade operate in the United States under circumstances which bring considerations of transportation so forcibly upon the attention of the thoughtful Engineer, as to place their study and application amongst his most important duties. A service of many years as Chief Engineer on several great railways of that country having given that development to my professional thinking, I attempted, on transferring my practice back after a long absence to Canada, to point out in the paper reproduced here the causes of the misfortunes of the Grand Trunk and the means by which those misfortunes may be remedied.

The original form of this pamphlet was placed about the close of May, 1875, in the hands of the publishers of the *Canadian Monthly*. The promise of those persons that it would appear on the first of July, was broken. The publication was put off from month to month until the following October, under a series of remarkable evasions. In the meantime my attention was directed to a similarity of a group of facts in my manuscript to a group in a letter from a railway-speculator of this city, which had just appeared in the London

Times. My article had, I discovered subsequently, been actually submitted to that person's perusal before its publication. I should disdain to complain thus of an act of that character if I did not fear that it may have had some relation to perturbations of last summer in the prices of Grand Trunk securities. A sense of professional honor having held me always aloof from connection with performances of those acute creatures, the "Bulls" and the "Bears," I cannot consent to appear, after an absence of twenty-five years, before Engineers to whom I am known in England or Ireland, under a suspicion of voluntary participation in a possible work of sharping.

My article in the *Canadian Monthly* has been treated somewhat after the fashion of that repast known to the Americans as "a free lunch." While several individuals have not hesitated to make use of it, they have done so not only without paying for "a drink," but without even nodding to the bar-keeper. The conditions of the "spread" appear, however, to have been violated in one instance which demands special mention—that supplied in the latest use which has, I must suppose, been made of it by the Directors of the Grand Trunk.

Within two months I have learned of a startling stroke of financiering by Mr. Potter. All I know of it, however, may be summed up in this extract from *Herepath's Journal*—an extract whose italics are mine:—

"It is intended that the £8,000,000 of debenture stock shall take the place of all the preferential charges, now amounting to some £400,000 a year, including the Postal and Military bonds interest, interest on land mortgages, on bank mortgages, Island Pond, *Atlantic and St. Lawrence rent*, *Portland loan sinking fund*, *Detroit rent*, *Montreal and Champlain rent* or interest, *Buffalo and Lake Huron rent*, 1st Equipment bond interest, 2nd ditto, *International bridge capital interest*, interest and rents on cars hired and stations rented, &c., &c., in fact *every charge* for rents, interest, &c., on the profits and now ranking before the 1st preference stock, and which is now paid in cash."

Now if the *status* of the leases be changed by the transaction referred to here from one within the possibility of sweeping them away, as I had proposed, under a foreclosure of the bondholders in the interest of the stockholders, that stroke of financiering is certainly less nice than sharp. To place the masses of the people in England who are sufferers by the Grand Trunk on their guard, if it be not now too late, or if it be too late, then to show them the one *underlying* cause of the miscarriage of their investments, I call attention in the present form to the extraordinary facts of those leases under the light of the

startling zeal which has been shown for their maintenance by the body that is responsible for what would be if my reading of the reference of *Herepath* be correct, the very *sinister* blunder of their original execution.

Sharp practice has wrecked several admirable railway-enterprises in the United States. The Erie, the Atlantic and Great Western, and several other lines of unquestionable merit now ruined, would have been highly profitable if carried out with singleness of purpose. From the hour at which they had become active subjects of the money-market, from the hour at which the ownership had fallen under the influence of *capitalists*, those undertakings had entered upon a career of chicane on the highway to ruin. Aware of this I had no sanguine hope that my appeal to the Grand Trunk's stockholders would have worked good results for their interests; but my correspondence and observation during the last seven months satisfy me that railways which have ever had the misfortune to become shuttlecocks of the Stock Exchange, not only in New York but also in London, may be held to have passed in one form or another out of the control of their original owners—to have passed from the conditions of legitimate business to those of a more or less unscrupulous finesse. If this general proposition have obtained special application in the late financiering for fastening on the stockholders of the Grand Trunk beyond release, the Bridge-outrage and the lease-ruin which were pointed out originally last October and are now again pointed out, in this article, then does there remain no room whatever for difficulty in charging the misfortunes of that enterprise, not to Canada, but to London.

The intrinsic merits of railway-investment in Canada are certainly outside any reasoning from the miscarriage of the Grand Trunk. The general fact remains, however, that but a few of the many lines of the country pay interest on their bonds; and perhaps but one, dividends on its stocks. I shall employ this opportunity to show briefly that these failures do not justify the conclusion that Canada as a field for railway-enterprise, is inferior to the United States.

The physical character of the Dominion is, at least, as favorable for railway-construction as the country South of the Lakes. The earnings of the Grand Trunk prove on very broad evidence that Canada is as fruitful as the United States in railway-traffic. The

argument on that point in this pamphlet shows that there is no difference between the two countries in the rate of working-expenses by reason of difference of climate. All the elements of intrinsic merit in railway-enterprise being seen, therefore, to exist in full force here, the general fact that Canadian railways are not profitable must be referred to some extraneous cause.

The Public Land Surveyor has been, with but a few exceptions, the best material offering here to the local demand for Civil Engineers. Those gentlemen had to study their new work as they went on with its execution; and while they deserve credit for their mastery of field-formulary, should be blamed but tenderly for their want of professional breadth. The English routine which they have succeeded generally in carrying out, they have seldom ventured to modify even at the demand of overruling reasons. Their practice wanted originality. But be this as it may, the confused mass of lines shewn by an inspection of a railway-map of Ontario, betrays a want of knowledge of railway-economics by what is ordinarily the guiding intelligence in popular action—that of the profession within whose province the subject lies. While making this statement as a duty to the reformation of a great interest of the country, I beg leave to cover any seeming of discourtesy in the case to gentlemen who have come into the profession, by confessing frankly that, had I not unlearned my own British training I should, in all probability, have done no better in giving *system* to the railways of Canada than they.

The experience at the service of railway-design here has been obtained under conditions totally inapplicable. That design found in England its Liverpools and its Londons established beyond disturbance; and had before it, therefore, but the simple duty of moving out its lines from those fixed points to their points of supply. Even those points of supply—the Manchesters, the Wolverhamptons, &c.—had been all settled *a priori;* and the new conditions of transportation involved disturbances too small to overcome the state of facts by which they had been determined. Here, however, all this is different. While Baltimore, New York, Boston, Portland, Montreal, are engaged in an undecided race for the trade of the same regions of the Continent, the aggregating points of those regions are engaged in a concurrent race of their own; met at every turn by competitors in the form of new developements; and all this while the vast distances by which

they are connected with the sea involve disturbances of their lines of outlet by the opening of new routes, the shortening of old routes, the reduction of through-charges by expansion of local traffic, &c.. &c. The economics of transportation having found neither space nor circumstance for evolution at home, have been evolved on this Continent under a free and wide competition; and in an extent and volume of result so great as to have forced themselves upon thoughtful observers in American practice, in the form of generalisations unknown to the professional training which has given shape to the railways of England and of Canada.

The Great Western follows the bend of a bow—that error of design subsequently leading to a ruinous competition along the string. The Grand Trunk goes to Quebec by way of Richmond—to strive for through-business under the disadvantage of an unnecessary length of 19 miles, with the North Shore. These are errors of the past; but they are reproduced in the recent blunder which lays an embargo on intercourse between the Upper and the Lower Provinces over the Intercolonial, by an addition to the proper length of the line of perhaps 35 per cent. The alignment that we see on the map meandering for 20 years from Toronto to Barrie, and from Barrie to the East and to the West, comes down to us reproduced by the experience at the service of Canadian railways to-day, in a line not even yet finished—that which wanders from Toronto to Orangeville, and from Orangeville to the West and North. A similar ignorance of movement on a great Continent lays down a line which is to go on from Montreal to failure at Ottawa; whereas by following its mission, it could grasp success at a junction with the Canadian Pacific on a direct line to the crossing of the River above Allumette. And not only the routes and the lines, but also even the gradients, of the railways of the country conflict with the Continental teaching which carries considerations of the carrying-trade into the determination of even a railway's mechanics.

The trunk lines of Canada having been glanced at, the remainder are but a series of short branches. That branches do not pay as distinct properties, is an axiom of universal acceptation by experience in the United States; but it is still not truer than that trunks whose directions are determined at random, or though determined on principle, take a shape in contempt of important considerations of economy, cannot be expected to pay. In short, then, the railways of Canada,

although unencumbered by heavy works, free from any *necessity* of severe gradients, unaffected in their operations to any extent more serious than American lines by snow, and traversing a field rich in supplies of business, do not pay for the simple reason that they have not been planned and carried out in accordance with those conditions of success proper to a new country and great Continent. Want of breadth, want of dash, want of a free and generous spirit in legislation, are the only reasons why a railway planned by thoughtful enlightenment and executed by a professional skill up to the level of its work, does not present itself here as in the United States, striking out boldly into the wilderness, enriching commerce and expanding settlement, while paying its owners a fair, if not even a generous, profit.

M. BUTT HEWSON.

Toronto, Ontario, May 18th, 1876.

GEN'L M. BUTT HEWSON,

CIVIL ENGINEER,

HAS resumed the practice of his Profession in Canada after a long and varied experience in the United States. He offers his services to the Public as Consulting or as Chief Engineer in the design or execution of Railway or Sanitary Works. He will also attend to cases of Arbitration.

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THE GRAND TRUNK RAILWAY.

THE Grand Trunk Railway reflects by its unprofitableness on the material interests of Canada. Mr. Potter's mistake in arraying the line against the character of the Canadian people and the progress of Canadian development, does not alter the fact that the financial result of its investments is a misfortune to this Dominion. A duty to the continued growth of the country demands that the failure of that gentleman's road to reward its owners, be placed upon its real merits; and that the placing be done in a spirit of sympathy for him and them, with a view to the reversal, as far as is now practicable, of what is a disaster applying in common to English capital and to Canadian progress.

In seeking a remedy for the unprofitableness of the Grand Trunk, the search should commence in an enquiry into the cause. Is there, then, any reason in the traffic resources of Canada, why it should not yield dividends? The answer to this question can be given with the authority of a demonstration by comparing certain facts of railways in the United States with corresponding facts of the Grand Trunk; and as recent discussion bases the failure of that line upon the overdoing of railway-construction in Canada, by applying the comparison to the field in which that alleged overdoing takes its extreme form—the Province of Ontario.

The following table is compiled mainly from "Poor's Manual" of 1873–4.* It may not be severely accurate; but is perfectly trustworthy as authority for the conclusions to which it points† :—

* Manual of the Railroads of the United States for 1873–4, by H. V. & H. W. Poor. New York, 1873.

† Since the first appearance of this paper on the Grand Trunk, the defence whispers that the facts cited here are not reliable. Mr. Poor is a painstaking, conscientious, collector of data; and is excellent authority so far as he is personally concerned, even though the facts called in question had not been received by him directly from the several companies—*amongst others from the Grand Trunk*. The hint that the specifications made in the following comparisons are not correct, is worth nothing.

Railways in Ontario.	Length—Miles.	Cost (Dollars).	Cost per mile (Dollars).	Gross receipts (Dollars).	Receipts per mile (Dollars).	Working expenses in per-centage of gross receipts	Remarks.
Grand Trunk	485	67,900,000	140,000	4,233,000	6,553	80.4	The cost of the Grand Trunk is estimated at £28,000 per mile on the authority of Sir Hugh Allan's pamphlet. The blanks in the table apply to new roads not yet introduced in detail into Poor's Manual.
Buffalo and Lake Huron	161	6,443,000					
Great Western	342	30,773,000	90,000	5,390,000	12,132	59.7	
G. W. leased lines	102						
Canada Southern	324	17,000,000	52,000				
Northern	140	6,086,000	43,000	895,260	6,023	79.8	
Toronto, Grey and Bruce	88						
Toronto and Nipissing	87						
Midland	109	3,348,000	31,000	304,000	2,719	56.9	
Brockville and Ottawa	84			275,000	3,279	65.6	
Central	28	691,000	24,000	32,000	1,137	77.4	
St. Lawrence and Ottawa	59			162,000	2,742	71.6	
Cobourg Line	46						
Whitby Line	19						

With the foregoing specification of the railways in Ontario, the comparison suggested may now be made. It is put in the following table, on the faith of the figures of Poor's Manual of 1873–4—that is to say, for the year ending with June, 1872—the population being estimated to that date; in the case of the American lines, from the census of 1870; in the case of the Canadian lines, from the census of 1871:—

Basis of Comparison.	Total miles of railway.	Total Population.	Population per mile of railway.	Gross receipts of the railways.	Gross receipts per mile of railway.	Gross receipts per head of population.	Dividends on stocks.
				$	$	$	
Ontario	2074	1,647,000	794	11,291,000	5,444	6 85	
Minnesota	1616	510,000	268	3,515,000	2,113	6 89	1 60
Iowa	2734	1,515,000	560	6,969,000	3,280	6 82	2 06
Wisconsin	1779	1,120,000	595	7,832,000	4,224	6 99	2 92
Maine	933	630,000	723	4,653,000	4,988	7 38	2 57
New Hampshire	627	320,000	395	3,625,000	5,850	11 33	5 70
Vermont	568	332,000	467	4,260,000	7,500	12 83	3 91
Michigan	1904	1,280,000	672	11,921,000	6,261	9 31	4 85
Indiana	3748	1,730,000	443	24,415,000	6,514	14 11	0 50

The table just given goes directly to the question of excessive railway-construction in Ontario. It shows that, in proportion to population, that Province has less length of railway than Maine, Michigan, Indiana; only one-half of the length in New Hampshire; and only one-third of the length in Minnesota. Excluding though it does all the earnings of one-third of her lines—those for which the returns are not

given in Poor's Manual—it shows that every inhabitant of Ontario contributed, notwithstanding, as much to railway-earnings as every inhabitant of Minnesota, of Iowa, of Wisconsin; and very nearly as much as every inhabitant of the old State of Maine. These points of comparison on the basis of population may be held as disposing of the allegation of excessive length of railway in Ontario, whether as a matter of fact or as an explanation of the failure of the Grand Trunk to yield dividends.

Over-construction being inadmissible, what, then, are the causes, of the unprofitableness of the great highway of Canada to its proprietors? The gross receipts set opposite Ontario in the table next preceding, do not, it will be seen by recurring to the first table, include new and unfinished lines. The earnings of 700 miles are thus, it may be repeated, omitted. The income per mile is, therefore, not $5,444 as set forth; but is in fact $8,186. Taking the figures of the table, however, regardless of this correction, they are good for the conclusion, that, when the railways of New Hampshire, with receipts of $5,830 per mile, those of Maine, with receipts of $4,988 per mile, those of Wisconsin, with receipts of $4,224, those of Iowa, with receipts of $3,280, and even those of Minnesota, with receipts of but $2,113, all pay dividends on their stocks, the reason why Canadian railways do not, the reason why the Grand Trunk with receipts of $6,563 per mile does not, must clearly be sought for elsewhere than in the activity of the people as measured by the volume of the traffic.

What of the severity of the Canadian climate? Does not that cause an extraordinary absorption of earnings in working expenses; and make thus the reasoning from the figures cited above, illusive? As this suggestion has been addressed recently to popular misapprehension in England, it demands, in order to avert the injury which it is calculated to do the railway-progress of the Dominion, an examination in fulness of evidence.

The selection of American States presented in the last table, has not been made in contemplation of a foregone conclusion. It has proceeded with the single purpose of eliminating from the question under review at this point, any disturbing considerations of climate. It includes, be it observed, all the States that border upon the Dominion, from Nova Scotia to Manitoba. It embraces in its averages several lines which

traverse regions whose winters are much more severe than the average winter of those traversed by the railways of Canada. Maine, New Hampshire, and Vermont, are represented on the one hand, and Michigan, Wisconsin, and Minnesota, are represented on the other hand, by items of the table which exclude from the comparison with those of Ontario, any special application of the question of climate against that Province, for the reason, *prima facie*, that the first group being mountainous, and the latter group being situated on plains of greater elevation, they embody averages of higher altitudes, while a glance at a map of North America will show that both groups embody averages including even higher latitudes. The popular misapprehension as to the exceptional effect of climate on railway-working here, may be held disposed of by the foregoing figures under the reading of this explanation; but the special force necessary in proof which is designed to "*reason* down what has not been *reasoned* up," demands, now that the consideration of the management of our great railway is being approached, that that misapprehension be met in direct issue on its merits in the special case of the Grand Trunk.

The earnings apportioned to the great Canadian highway in Ontario yield, according to the first table given in this paper, an average per mile of $6,553. The working expenses of that line, although paid out of receipts higher than in the case of any but one of the roads whose averages are given in that statement, stand, be it observed, in percentage of the gross earnings, at 80.4. Now, the value of climate in determining that percentage may be traced in general by a comparison with the corresponding facts in the country at each end of the line, and as far as may be, along its route, including even those lines which run from it 50 or 80 miles northerly into basins of greater elevation and higher latitude. A review of the question in that light presents it thus:—

Working expenses of all lines in Michigan	1904 miles	62.5 per ct.
Working expenses of the Great Western of Canada	444 miles	59.7 per ct.
Working expenses of five lines running northerly from the Grand Trunk in Ontario	420 miles	72.4 per ct.
Working expenses of all the roads in Maine, exclusive of the Atlantic and St. Lawrence	783 miles	72.2 per ct.
Working expenses of the Grand Trunk..	1377 miles	80.4 per ct.

The specification of working-expenses given here shows that all the roads of Michigan—a region situated at one end of the line—are worked at a cost of 17.9 per cent. less. It shows that, with the exception of one railway managed by the Grand Trunk Company, all the lines of Maine—a region situated at the other end—are worked at a cost 8.2 per cent. less. It sets forth that the Great Western of Canada, including a trunk which runs within twenty miles of it for a distance of 180 miles, and a branch which extends to the north of it for 90 miles, is worked at a cost 20.7 per cent. less. Showing, besides these facts, that five tracks extending northerly from it, in Ontario, into the colder regions of Ottawa, Pembroke, Collingwood, transact their business at a cost 8 per cent. less, the conclusion is irresistible that the excessive absorption of the receipts of the chief railway of the Dominion in working-expenses, does not find its explanation in climate.

A comparison such as that just made is met by the hint that the extraordinary proportion of the working-expenses of the Grand Trunk is referable, mainly, to the severity of the climate along its extension eastwardly from Montreal. That part of the line being but one-fourth of all, the cause which, operating on that length only, can affect the running cost on the whole to such an extent as it is said to do, must stand out very broadly in the case of other lines worked under similar conditions. What, then, are the facts of roads situated in the same latitudes?

The European and North American Railway of the State of Maine begins in the latitude of Prescott, on the Grand Trunk, and ends in the latitude of Richmond, on the branch of that line to Quebec. One hundred and fourteen miles in length, it was worked at the date of the latest returns given in Poor's Manual of 1873–4, for a proportion of its gross earnings no greater than 55.0 per cent. The Intercolonial Railway includes in the results given for it, the European and North American line of New Brunswick. The Government of the Dominion of Canada manages that line; and may be supposed to do so under the usual penalty of a control so remote and loose—extravagance. And yet what is the result in that case? Beginning at St. John's, and running as far to the north as the Gulf of St. Lawrence, the 149 miles included in the report of that line by Poor, though they correspond in latitude almost exactly with the Grand Trunk from Montreal

to Quebec, consume gross earnings in the business to the extent of but 67.8 per cent.

Several railways of the North-west of the United States operate in winters as severe as those of the Province of Quebec. Incorporated with other lines, they do not stand out in special facts; and are, therefore, excluded from use here. One, however, there is, which presents an extreme illustration of the value of climate on the lower sections of the Grand Trunk.—The Marquette, Houghton and Ontonagon Railway is 49 miles in length. Making a connection at an intermediate point with the lines of Northern Wisconsin, it begins at one port of Lake Superior, Marquette, and ends at another port of that lake, L'Anse. Situated on a Peninsula swept in winter by winds from an ice-bound sea on the one side, and from another ice-bound sea on the other side, it runs, furthermore, through a region whose elevation above the banks of the St. Lawrence below Montreal must be held, according to Humboldt's equation of heights, to assign it a climate over two degrees more northerly than that proper to its parallel of latitude.* But waiving all consideration of its exposure and of its elevation, the Marquette, Houghton and Ontonagon, if moved eastwardly along its geographical parallels, would, placing one of its termini at Quebec, extend from that city towards Three Rivers, its whole length lying on the northern shore of the St. Lawrence. Yet, while its gradients are highly unfavourable to cheap work, that line, which traverses a climate more severe perhaps than any known to settlement in the Province of Quebec, transacted its business for the year represented by its last report in Poor's Manual, at a cost to its gross earnings of but 56.2 per cent.†

Facts in the States containing its eastern and its western termini, and in the country along its route, show that our chief highway is worked at a cost excessive to an extent varying from 8.0 to 20.7 per cent. The excess has been shown to hold in the case of a road in Maine having an average latitude equal to that of Montreal, in the ratio of 25.4

* The isothermals of the maps rest, in reference to this region, on no data. Mere fillings-in at random between remote points known to observation, they are worth nothing against the above inference as to the climate of the Michigan-Superior Peninsula.

† The detention of trains caused by snow on the Marquette, Houghton and Ontonagon Railway during last winter—the severest known for 40 years—aggregated, according to a letter of the officer charged with its superintendence, 85½ hours.

per cent.; and in the case of a road in New Brunswick conducted with the extravagance fairly supposable in the transaction of such a business by a Government, has been shown to hold, in a latitude corresponding with that of the branch connecting Montreal with Quebec, in the ratio of 12.6 per cent. And the returns of a railway in the terrible climate of the Peninsula lying between Lake Michigan and Lake Superior, have confirmed those proofs of the insufficiency, if not of even the irrelevance, of the plea of climate in explanation of the working expenses of the Grand Trunk, by declaring their consumption of the gross earnings to be excessive to the extent of even 24.2 per cent.

Overdone construction of railways does not apply in Ontario as a matter of fact; and is, therefore, not admissible as the explanation of the failure of our great line to reward its owners. Insufficiency in the volume of traffic does not hold in the case; and must consequently be set aside as the cause of the misfortunes of that enterprise. What then is the true cause, seeing that those offered by the Directors cannot be accepted? Earnings that, on the evidence of the results in all other cases, might be supposed available to a large amount as profits for the proprietors, are absorbed in the working; and as this exceptional absorption has been shown not to be referable, as the Chairman of the Company says it is, to incidents of climate, it must be referred under a strong presumption to the only other cause remaining for its explanation—the management.*

A review of the government of our chief railway in relation to the failure of that undertaking to yield profits, must begin here in a general form at the question of working expenses.—The Atlantic and St. Lawrence Railway is worked under lease by the Grand Trunk. Its owners keep an account of its transactions; and supply thus an illustration of the lessee's adaptation to railway-service on this Continent. The follow-

* The word "management" is used throughout this review in the sense of a legal entity holding perpetual succession. To put any other interpretation upon it would be not only painful to the writer, but also unjust to individual directors. Indifferent as he is to any conflict that may rage, as usual in large companies, between the Ins and the Outs amongst the stockholders, his words do not admit fairly of any rendering outside the scope of the object with which he has devoted so much labor to this article—that of a conscientious anxiety to be the means of placing the investments in the Grand Trunk on the best possible footing, in order to improve the prospects of railway-construction in the field of practice to which he has again—after a long absence—transferred his interests as a Civil Engineer.

ing table exhibits the results in that case under contrast with corresponding results of ordinary management in the case of every other railway of the State of Maine:—

RAILWAY—WORKING IN MAINE.

The Railways in Maine for which the Net and the Gross earnings are given in Poor's Manual of 1873–4.	Length in Miles.	Gross Receipts in Dollars.	Working expenses in per-centage of gross receipts.
Bangor and Piscataquis	48.20	114,000	73.7
Knox and Lincoln	49.00	88,000	59.1
Maine Central	310.00	1,928,000	68.9
Portland and Ogdensburg	60.00	115,000	65.2
Portland and Oxford Central	27.50	20,000	70.0
Portland and Rochester	52.50	132,000	71.2
Portland, Saco, and Portsmouth	51.30	659,000	73.0
St. Croix and Penobscot	21.00	81,000	68.0
Atlantic and St Lawrence (worked by Grand Trunk)	149.50	1,146,157	95.6

The table just given sets forth the fact that the Grand Trunk Company works the Atlantic and St. Lawrence Railway at an excess above even the high average of its whole line, to the extent of 15.2 per cent. of the income. In showing this, and in showing, further, that its transaction of the business of that road of the State of Maine, costs more of the gross earnings than any of the lines on either side of it, by so great an excess as 21.9 per cent., it leaves, after all that has been said above in proof of the inadmissibility of other explanations, no escape from the conclusion that the absorption of so exceptional a proportion of the receipts of the Grand Trunk in the cost of its business, is chargeable to the directing body.

The working-expenses reflect pointedly on the management. They suggest a general review of its doings from the outset, beginning with that most striking evidence of its want of adaptation to the circumstances in which it has acted—the Victoria Bridge.—Those who have had experience on lines in the United States, may have seen, as they entered that structure on their passage of the St. Lawrence, a foreshadow of the monetary results of railways in Canada. The millions of capital sunk in that admirable work of British engineering might have proved, as in the case from which it is copied, a

wise expenditure in a country of dense population; but must be regarded worse than waste since, expended on a mile of track in a country thinly peopled, they have been hung, in a very madness of formulary, a millstone around the neck of a great enterprise. And the moral pointed in that instance may be drawn through this review at each of the general facts which lie at the bottom of the failure of our chief railway as a subject of investment—that the circumstances existing here declare to be totally out of place, an administration based on ideas formed on railways in a country so old and thickly settled as England.*

To give point to subsequent criticisms on the management, it may be well to lay down here a few simple premises:—

Economy of length is a consideration in railway-carriage overlooked or undervalued at home. Its violation in any serious degree is not a danger in a system whose lines are so short. On a great Continent, however, where the spaces operated on are vast, and in a new country where the lines of intercourse, not setted by immemorial usage or final adjustments of trade, are in progress of determination by a competition which knows little restraint in *statu quo*, every rod in the length of a railway has a creative value. While, for instance, 20 miles of unnecessary length in a line tapping a great stream of traffic, might result in the diversion of that stream to a rival, it would at the same time burden the through and the way-business remaining, by an unnecessary outlay in transportation. If six trains each way should prove to be the measure of the business in that case, the excess of working would represent 240 train-miles per day; and this waste of effect, put at, say $240, would amount to a waste of money at the rate of $87,600 a year. Capitalizing that annuity at 6 per cent., it would represent $1,460,000; and would show, thus, the saving of every mile of distance in the case of a line of 12 trains a day to be worth $73,000 *on the ground of economy in working.*

* Canadian management, whether in legislation, design, or execution, stands in evidence in the railways of the country, as in no respect different from a management purely English. The censure passed in the text disregards the question, whether the responsibility for the blunders it points out rest with the promoters on this side of the Atlantic, or with those on the other side. It refers to ideas applied here in a routine blind to radical differences in things—ideas which, common to all our managements, Canadian as well as English, hold in the railways of the Dominion generally to an extent which has left its blight upon the development of the country, in the ruin of their stocks.

Distance and cost may be taken in railway generalizations as convertible terms. A line equidistant at all its points from two ports, represents, therefore, a succession of instances of equality of cost of transportation to either port. In the competition of the two for the freights of the interior, that line may be said to traverse a route of neutrality. Like waters dividing on a ridge, the surpluses on either side take different directions, one outflow going to one port, the other other outflow to the other port. In an analogy from nature, it may be said that the division of those two volumes takes place on a trade-*summit;* while the area bounded by two such summits—one on one side of the surface tributary to the business of a port, and the other on the other side—may be said, in pursuance of the same analogy, to constitute a trade-*basin.*

The products offering for transportation within any trade-basin, belong economically to the shipments of the corresponding sea-port. They constitute the proper traffic of the railway or railways designed to tap that basin for discharge into its proper port. The restriction put by inference from this upon railway-rivalry, may, it is true, be made by disturbing considerations to vibrate over a certain breath of debatable ground; but still cannot be pressed aside beyond a limited extent, in pursuit of a carrying-trade conducted legitimately. To make this important point of application to the present case more plain, it may be added that, as no competition can be maintained profitably with a rival who obtains his wares at a first cost necessarily lower—and as length of transportation is, in general, the measure of first cost in railway-competition—distance must be held to put upon that competition an impassable limit of range.

The elementary considerations laid down here may be applied, in the next place, to a preliminary survey of the field of the Grand Trunk.

Montreal is nearer by 18 miles of railway than New York to the Niagara frontier at Suspension Bridge. It is further by 25 miles of railway than New York from the Niagara frontier at Buffalo. During her direct intercourse with the sea, our commercial capital includes, therefore, in her trade-basin—the area, be it recollected, tributary economically to her commerce—the whole Province of Ontario. In winter, however, the ocean recedes from her to a distance which,

measured on her outlet to it, is 297 miles. At that time, abstract economy forces Montreal back from her summer-area of tribute, to hand over to her rival, New York, all that part of it—about 27,000 square miles—which lies west of a line running from a point between Whitby and Port Hope in a direction north-eastwardly towards the Valley of the Ottawa. And in application of this generalization, it may be stated for the purpose in hand that, while the Grand Trunk in summer occupies west of Whitby, a strong position subject to but a feeble competition by the railways of New York, it does so on a field that must still be considered debatable, seeing that it may be held by *either* party at *one* season of the year by right and at the *other* season of the year, so far as it may be held at all, but by policy.

Abstract economy would assign to Montreal in a railway-competition with New York during the navigation of the St. Lawrence, the trade of all the Penisula of Michigan and of the Upper Lakes. At Detroit, the commercial capital of Canada has the ascendancy in the struggle at that time of the year, by virtue of an economy equal to the cost of transportation over 96 miles; at Sarnia, of a transportation over 122 miles. Experience declares, however, that so far as existing attempts to divert the commerce of the Upper Lakes go to prove the contrary, their steamships, abhorring short voyages, cannot be arrested on their way to transhipment at Buffalo. And their rates commanding all the great aggregations of the shore-line of those inland seas, the railways have but comparatively little of the through-business to struggle for in summer beyond that which the outlying lines may have gathered by the way.

The traffic offering at Detroit and Sarnia offers in a double competition—with a navigation that can underbid the railway, and with railways which bring to a reduction of their disadvantage in distance, the advantage of superior support by the way. But the excess of their length disappears altogether in their rivalry with the Grand Trunk, when winter, closing the St. Lawrence, makes them masters of the freights offering at Sarnia and Detroit, by right of an economy of transportation representing the cost, in one case on 175 miles of track, and in the other case on 201 miles. And, thus, obtainable at but low rates in summer, and subject to the control of rivals in winter, the through freights within reach of the great Canadian line at Sarnia and Detroit must be held, not only

because of their cheapness, but because also of their unsteadiness, to constitute a business which is, at best, a questionable subject of effort.

Let this review of the field pass now from the West to the East.—Between Montreal and Toronto the way-freights of the Grand Trunk are disputed in summer by navigation. American ships bring to bear within that extent of the route, an active rivalry at all points of large aggregations from the back country; while the freedom of the coast to Canadian vessels extends a similar rivalry, by a system of touchings at ports along the line, to several of the smaller stations. At that season of the year, concessions adapted to these circumstances are the only means of obtaining business along that part of the road, while the business of the points thus acted upon may be commanded in winter as far west as Port Hope on any judicious schedule. Even then, however, Whitby being but 555 miles by railway from the harbor of New York, while Port Hope is 567 by railway from the harbor of Montreal —Portland—the footing of the Grand Trunk west of Port Hope can, as stated above, be sustained, so far as it may be sustained at all, but by address.

The survey that has been just made of the field shows, it may be observed in passing, that the management of our great railway demands originality of thinking, closeness of observation, and flexibility of method. The object of that survey, however, has been to point out views and circumstances which enter into a proper judgment of the leading facts of the administration of our most important railway.

The Company had a choice of two routes between Montreal and Sarnia. Following the direct line, the track would have been laid 15 or 20 miles to the north of Lake Ontario with a considerable economy of length. In that event it would have run near the "rain-divide;" and, by crossing the drainage about its source would have effected a large saving in the character of the bridges. But an experience disregarding all the surrounding circumstances, decided that the route should pursue the shore of the Lake; and thus burdened the capital of the Company with an unnecessary length of track, a more expensive system of bridging, and many stretches of heavy and difficult embankment.

Waste of capital was committed by the management in other forms than that of the blunder as to route. English

practice adhered to its routine by contracting for the construction of the road as for a coat completed to order. Economy should have suggested that Messrs. Peto, Brassey, & Betts be confined to the taking out of the centre of the cuts, leaving the slopes to be removed by the Company; and should have suggested, further, that those gentlemen be limited at swamp-crossings and such places, to the laying of a temporary track on "corduroy" or trestling, leaving the ultimate road-bed for construction in the permanence of embankment by the Company. This course would not only have saved interest on capital which lay unproductive for a long time, by opening the line two or three years in advance for traffic; but would have effected a still further economy by giving additional employment during the development of business to the Company's half-idle track and rolling stock. But an experience incapable of modification to the expediencies of the case, pursued a routine that, incurring from one year's to three years' interest on millions of expenditure, and adding to the necessary cost of the earthwork so much as perhaps even 20 per cent., may be traced to-day in the volume of the Company's balance-sheet.

On the direct route between Montreal and Toronto, the road would have *commanded* for a distance of 300 miles, way-business from both sides of its track. The area of the local traffic—evidently the only source of income on which it could have counted with confidence—would have expanded in that case into the interior to the greatest possible extent, beyond all danger on either hand of future loss by competition.—A body of producers separated from a railway by a waggon-haulage of 30 miles is much more likely than one separated from it by a waggon-haulage of but 15 miles, to bring that line into competition, or having brought it, to stray off to its rival.—Ideas formed in a practice not at all adapted to this great and new Continent determined, however, that the line should follow the lake; and in doing so not only exposed it to an ultimate reduction of tributary surface by rivalry on the north, but gave it from the outset a reduced area of local traffic subject to competition for six months of the year with a free navigation. And thus has the management become responsible for aggravating its waste of capital, by a contraction and an embarrassment of its more profitable business.

The experience that decided on the route disregarded economy of length when it settled on a total abandonment of

the direct line. It did so to a further extent when it laid down its track in general conformity with the meanderings of the Lake-shore. Adding to these items of loss caused by a management governed by an inapplicable training, the further lengths of route incurred unnecessarily in the windings between Toronto and Sarnia, the whole sums up to the waste of income and crippling of grasp represented by an excess of distance to the extent of about 20 miles! Conceived though the Grand Trunk was in a design for delivering American freights on board British bottoms, the agents of that design did not stop at its embarassment by the blunders between Sarnia and Montreal; but put the *coup de grace* to those evidences of unfitness for their work by the further blunder of embarrassing the road's intercourse with the sea for six months in the year, by a *detour* on the route between Montreal and Portland, to an extent which gives an aggregate of wanton excess of transportation, equal to a prohibition on freights in favor of rival lines, at the rate of a dollar per ton!

The railway reached Sarnia with its objects placed by waste of capital and waste of distance, under serious difficulties. At that point, however, if it were wise to have adhered to its original purpose, the duty of the management demanded the encouragement, by its moral support, of a direct extension giving it the shortest possible connection with the granary of the West, Chicago.* It left that connection open to be occupied by the rival now about to enter into the enjoyment of the "Air Line" that discharges upon the Canada Southern at St. Clair. Full, however, of stiff experience, full of a spirit of competition which does not hesitate to grasp at what it cannot hold, the Company decided that its best way to Chicago lay in encouraging first and leasing afterwards, the line which, by giving it a terminus at Detroit, initiated its mistaken policy of hostility to the Great Western. And what was the result of that error? The Grand Trunk was enabled by it to deposit freights at Toronto in a transportation of 564 miles, while the Great Western could deposit them there in a transportation five miles shorter, and at rates which, sustained by its great resources in general business, might have been held to have declared the competition, if not

* This very measure was urged upon the Company at the time in a full and formal statement protesting against the extension to Detroit—a statement made to the chairman by the writer's esteemed friend, the Hon. Malcolm Cameron, M.P.

ruinous, at least unprofitable.* And that folly was all the more wanton, inasmuch as an avoidance of war with the Great Western would have presented the alternative of competition for the business of Chicago, by the "Air Line" referred to above, under the advantage of a transportation twenty miles less than that by way of Detroit! Here again the failure of the great railway of Canada to yield profit to its stockholders, can be traced from the very inception of the enterprise to want of adaptation to the special circumstances of the case in a set of ideas imported cut and dry from railway-offices in England!

Passing from errors of design and execution that have wasted capital and restricted traffic, this review will touch now on errors of administration that have exhausted earnings.

The American rivalry which advances into Canada in winter, does so in no instance with greater force than along the line of the Buffalo and Lake Huron. A direct extension of her own system, that railway enables New York to act with the highest possible effect at that season, in not only draining from the Southern side of the Grand Trunk its local traffic, but in even tapping its trains on their arrival at Stratford. While that line lies in summer *across* the then trade-basin in which it is situated, and its traffic may be set down at the time as small, it is still a traffic tending, from the moment it reaches the line, in the direction of New York. But in winter, that road runs directly towards the outlet of the trade-basin to which it *then* belongs; and operating New York-wards at even its crossing of the Grand Trunk with an economy equal to the cost of transportation over 181 miles, is attached to

* The freight-field traversed by the Great Western belongs, be it recollected, to New York at one season of the year, and at another season to Montreal. The true position of that line so far as the way-traffic is concerned, is one of free action in the direction of either at the proper time; and, therefore, as between the competition of the lines of New York with the Grand Trunk for the business of Western Ontario, a position of neutrality. If that line had not been attacked, its local freights would, no doubt, have been allowed to move under a schedule open, if not even inviting, to movement in summer along the main line and the Toronto branch towards Montreal. This might have been made to bring with it, under a joint arrangement between the two roads, the largest possible amount of the business offering at even Detroit. Instead of the hostility involved in the extension to that place, this co-operation would have worked with excellent results to both lines, by, on the one hand, saving the Great Western the disadvantage of alliances where her true position is that of freedom, and on the other hand, by conferring on the Grand Trunk in its competition with the lines of New York, the advantage of neutralizing that powerful agency, and of even using it to a certain degree as a support.

another system than that of Canada by a force which passes beyond all the restraints of schedules framed with regard to profit.

The Grand Trunk has leased—leased even in perpetuity—that agency of New York, the Buffalo and Lake Huron Railway! From Goderich to the crossing of our great line at Stratford, the contract, however questionable for even that extent—45 miles—of the whole, might find a seeming of justification as a means of holding freights which seek Montreal voluntarily in summer, by enforcements of schedules in winter. But no restraint of schedule consistent with gain can reverse the natural out-flow southwardly in either winter or summer, of the mass of freight on the 115 miles of the Lake Huron Railway between Stratford and Buffalo.*—On what ground of reason, then, did the management carry its spirit of grasping into the lease of a line belonging, thus, by an economic force beyond the legitimate operation of tariffs, to another, a rival system?

Extraordinary though the fact of the Buffalo and Lake Huron lease is, still more extraordinary are its terms. Held, during the process of its completion, unproductive for sections of 30 to 80 miles in the hands of a contractor, that line was opened for traffic in 1856–8, at a cost of $8,400,000. Its full capital expended before it had obtained any development of its business, it fell from the day of its opening into debt, until it had become virtually insolvent. About four millions of dollars of deficit had been liquidated by an issue of its stock—a deficit that showed an average, up to 1868, of $350,000 a year! The directors of our great highway finding that competing line thus bankrupt, lifted it not only into solvency, but into riches, by a lease in perpetuity, converting half of the four millions of the arrearage-stock into Grand Trunk common stock, the other half into Grand Trunk fourth preference stock, and, while paying five-and-a-half per cent. interest on the bonded debt, paying upon the original stock a graduated rate of dividend which, having reached last year 4½ per cent., is to reach in 1878–9, five per cent.!

But the Directors in going outside their proper business in

*The Directory appears in its leases and competitions to have no perception of the limits to legitimate business. It seems to disregard all elementary considerations of economy in these cases, and to hold that, under the operations of "control," traffic may be bent in any direction at the good pleasure of the schedule-makers, because of a ductility which knows no limit!

the case of the Buffalo and Lake Huron Company, did not stop with the lease.—The Great Western of Canada, the New York Central, the Erie, and the Lake Huron Railways are all concerned in the crossing of the river at Buffalo. The three rich companies succeeded, however, in placing the burden of the ferry at that point, as a sequence of the Buffalo and Lake Huron lease, upon the facile-tempered management of the Grand Trunk. $80,000 a year was thus taken from the earnings of that impoverished line to maintain a ferry, 115 miles away, and tributary for twelve months of the year, in despite of all schedules, to the traffic of rivals! But that is not all; for the management, anxious to give that favorite competitor, the Buffalo line, an outlet more lasting than lease or ferry, has committed the Grand Trunk to an expenditure upon a bridge at the same place—a structure in which it is *interested* to even a less extent than it is in the Thames tunnel —at the rate of $100,000 a year for twenty-eight years! The concern of the stockholders of the Grand Trunk in the approach of New York to their field of traffic is unintelligible as a motive for the construction at Fort Erie of an International Bridge, however readily it might be accepted as an explanation of the construction there of a Chinese Wall.

The lease of the Lake Huron line brings into question broadly the capacity of the Grand Trunk management to drive a bargain. The Detroit and Sarnia Junction Railway tells a similar story. It extends for 59 miles, and on a route which, not very far from a water-way, involves a competition at several of its points with a navigation. Whatever of local freights it may command, tend naturally to the steamships and markets of the city at its southern terminus. Of little or no service to the Grand Trunk during summer, its chief, if not its only use to that line, holds but in winter as an agency—the inferior of two from which the choice has been made—of the policy of competition for through-freights. The cost of the road is set down by Poor at $2,169,736—$1,074,736 being a bonded debt and the residue stock. It has been leased for a rent, exclusive of working and maintenance, yielding a clear profit at the rate of six per cent. interest on the debt, and a dividend of four per cent. on the stock—a second instance in which the management of the Grand Trunk makes rich all the roads it touches except its own!

Port Huron—opposite Sarnia, on the St. Clair—drew breadstuffs in 1874 to the value of $37,000 from Canada. Detro..

drew breadstuffs during that year to the value of $173,000 from Canada. The current of commerce which rushed past those two places in the water-carriage that deposited, in 1872, a bushel of wheat in New York from Chicago for 24½ cents, swept those products as it went on to its ultimate destination on the sea, from those very termini of the Grand Trunk.—So much in illustration of the direction of traffic at Detroit and Sarnia. Again: that railway cannot deposit freights from Lake Huron at Montreal short of a transportation over 501 miles of track; while the Northern of Canada can do so in a transportation of 427 miles*; the Midland of Canada in a transportation of about 384 miles. In the teeth of these facts the Grand Trunk maintains a line of steamers on the Upper Lakes with the view of collecting freights for shipment from Sarnia to Montreal, over 501 miles of Railway! True, those steamers are not owned and worked by the Grand Trunk; but that rather confirms than corrects the statement that they are maintained by that road, unless it is supposed that a private individual would invest his capital in an attempt to reverse the route assigned to commerce by a broad and plain economy, without making himself safe with a management remarkable for facile bargains.

The readiness of the Directors to assume extraneous outlays is exhibited strikingly at Prescott.—The St. Lawrence and Ottawa line connects at that point with our trunk railway. It is a virtual extension of the great chain which extends from New York to the opposite bank of the river at Ogdensburg. Another line terminates at that point on the American side; and constitutes the fourth which is concerned in the crossing. As at Buffalo so here, the management accepts the burden of the ferry, supplies the capital and works the steamboats, shrinking from the unpleasant duty of haggling, in a facility of temper which, were a legal a natural entity, would command admiration for the magnificence of its amiability!

The Montreal and Champlain Railway extends from the Grand Trunk 49 miles in the direction of New York. Having fallen into arrear, its revenue had become subject to a floating debt when it was incoporated in our great railway under lease. Its capital account consisting of funded liabilities in the sum of $882,813, and of stock to the amount of $1,534,875, the

* Though competing for the Lake-business under a rail-transport 74 miles less than that of the Grand Trunk, the Northern Railway has abandoned that business as unprofitable.

rental agreed on, not only paid in 1872, 6 per cent. interest on the bonds, but paid also on the stock a dividend of 5½ per cent.—showing that the Montreal and Champlain Railway is another of the favored lines raised by lease at the cost of the treasury of the Grand Trunk, from poverty to affluence.

But the Directors have fallen into no error more flagrant than that of the lease of the Atlantic and St. Lawrence. Having originated in the commercial ambition of the city of Portland, that road was in the hands of an interest perfectly co-operative with that of the Grand Trunk. If a lease were at all to bind the two together, it should have been of the line between Richmond and Island Pond to the Portland Company; because that Company could have afforded to work the whole on the lowest possible schedule in consideration of the indirect results arising in the expansion of the commerce of the chief owner, Portland. And that working applying to a business subject annually to a great flow and a great ebb, was evidently of a character which a skilful management would have thrown upon the other party—a party, be it remembered, whose interests guaranteed the highest obtainable advantages to the winter traffic of the Grand Trunk.

Prudence ought to have forbidden the commitment of the management to a discharge upon the sea at Portland for ever. The 297 miles of extra transportation by which it encumbered its business in that case, should not have been accepted as unavoidable while a single effort had remained untried to maintain winter communication with the ocean at Quebec.* That communication should have been a settled hope of the Board if only to make 172 miles of its own track, which have been perhaps a burden upon its revenue, a source of profit. A foregone conclusion was, however, permitted to assign the navigation of the great Canadian inlet of the ocean to the impracticable, in the teeth of the new appliances embodied in the steamship; and to close the door of hope held open by those appliances with a lease binding the traffic of the Grand

* Since the appearance of my article in the *Canadian Monthly*, the question of winter navigation to and from Quebec seawards, has made an advance from the speculative. A Parliamentary enquiry which brought out highly promising evidence on the subject, has lead to the acceptance of a proposition made by a ship-builder to test the matter practically at the cost of the Government. That measure proving, as there is reason to believe it will, successful in the light of dollars and cents, the revolution which will follow in the circumstances of the Grand Trunk will place its operations under conditions that cannot fail to rise up in severe condemnation of any attempt to fasten the lease of the A. and St. L. upon the stockholders of the Grand Trunk.

Trunk for five months of the year to the reduction of volume incident to its delivery upon the sea at a point so remote as Portland.

The lease of the Atlantic and St. Lawrence stands condemned, furthermore, in the indirectness of the route. Even if the contract had been expedient in any other, or in every other point of view, it was clearly inexpedient in this. And now arises a rebuke of its folly in the fact, that while it ties the Grand Trunk for ever, if allowed to stand, to the cost and restricted traffic incident to an outlet upon the sea over a line of 297 miles, another line has grown up which offers in vain to reduce the cost and expand the traffic by performing the same work with a transportation 60 miles less.

To digress for a moment here, it may be observed that the chief disadvantage of the Grand Trunk lies in the fact that one-half of the length of its main line—the half west of Port Hope—runs for five months of the year *across* the direction of the economic outflow of trade. The freights which it acquires under these circumstances must be carried at rates fixed closely to the actual cost of transportation; and even then can be counted on but in a stream more or less reduced. Traversing great lengths of the track, that traffic would be a source of large income if it could be retained under a schedule independent of a competition of disadvantage. Now the reason why this cannot be done in winter, lies in the recession of the seaport from Montreal to Portland; and that reason followed out, shows that the extent in Western Ontario of the reversal of the attitude of the line in winter, depends on the extent of that recession. If, instead of the Atlantic and St. Lawrence, the outlet to Portland lay over the shorter line offering for that purpose, the degree of the reversal would be very much reduced; but if the winter-terminus were established in conjunction with ocean-navigation at Quebec, the reduction would have been carried still further in a gain to the Grand Trunk by the increase of its business and the strength of its control. Removing the limit of traffic proper to that great railway to a line beginning about ten miles west of Toronto, and passing—leaving Guelph on the left—midways between the roads to Owen Sound and Southampton, it would, while adding 13,000 square miles to the permanent area tributary to Montreal, enable that railway to command in winter, the local business at full rates as far west as Guelph.

Passing from the impolicy of the lease to its terms, be it remembered that when the City of Portland invested her credit in the Atlantic and St. Lawrence, she would have done so as a gift. The profits she looked for were other than dividends. Now, the Grand Trunk-management, in keeping with the character of its bargains, bound itself in its lease of the Atlantic and St. Lawrence to pay six per cent. interest on the bonds, four per cent. on the stock, and to maintain for the City of Portland a sinking fund for the redemption at maturity of her stock-debentures! In comment on these stipulations it may be added, on the faith of the owners of the line, that the lease costs the proprietors of the Grand Trunk a draught upon their income—a loss without any supposable necessity whatever—to the amount of $280,000 a year!*

The errors of administration which have been pointed out above, have been confined to instances admitting of an approach to an estimate of their equivalents in money. But the waste of income that may be held chargeable to the management under the head of working-expenses, cannot be put fully in that way, because of want of information as to the details. Entering on that branch of this subject now, with the intention of considering it as far as practicable in specification, this review will treat it, in the first place, in the form of general suggestion.

The peculiarities of the field of the Grand Trunk's operations make its working a duty of nicety When even one per cent. of the cost of that service represents such a sum as $70,000, the ordinary shareholder can understand how expensive may be its direction under a want of flexibility and tact. The result as it exists cannot be scrutinized in detail without incurring a risk of violating the propriety which sustains the administration of a great practical business under any suspicion not resting on proof.† But it may be said on

* It is to be hoped earnestly that the interpretation put in the preface to this pamphlet upon the late financiering of Mr. Potter, is incorrect. An attempt to fasten upon the unfortunate stockholders of the Grand Trunk such a lease as this of the Atlantic and St. Lawrence *as soon as possible after* my article had shown it to those stockholders to be a ruinous blunder, would have no escape from the condemnation of all men of honor as a stroke of very sharp practice.

† The writer of this article would feel wronged grievously by any application of the text to the disparagement of the Company's employees. Even though he were not saved by his sympathies as an old railway-officer from an intention so unjust, he would certainly be restrained by his sense of honor from injuring a body of worthy men in the esteem of their employers. His remarks *go to*

one head of the subject, that, while there are considerations which point to the belief that the through-traffic of the Grand Trunk is carried on at even an ultimate loss, injustice might still be done by pronouncing on that point beyond the suggestion that no mere showy returns of tonnage and passengers are of any real worth when obtained in violation of the rule that every use of the property should bring with it a demonstrable profit.

So long as Portland is its nearest outlet on the sea, the through-business of the highway of Canada should be but a secondary consideration. Development of way-traffic should be held by the management its primary duty. Subject to the diversions of attractive forces, at one season or another, along the whole length of the line, the local business can be held at its largest volume but by close watching, exact thinking, and nice adjustment of means to an end. Whether or not a want of these may be the cause, this review does not venture to say; but it submits to those who have access to the facts that loss of way-business west of Toronto may be suspected on general grounds; and may be suspected east of Toronto on the special ground that imports of Canadian products were *shipped from the line of the Grand Trunk* at Toronto, Whitby, Port Hope, &c., into the American ports of Lake Ontario to an amount that reached, in 1874, a value in breadstuffs alone, of $4,500,000!

The loss of way-business and the charges for through-business, though probably constituting evidences of a vicious system, cannot be reduced here to the positive. They are therefore disposed of in the foregoing remarks in order to place this review again on the footing of proof. With that object it takes up the subject of the working-expenses in connection with one branch of the superintendence—the disposition of the rolling-stock and the making up of the freight-trains.

About 1864–5, our great railway made additions to its rolling-stock by hiring. The cars obtained in that way for the service of the Company numbered in 1871 so many as 2,089. Representing in the expenditures of that year, a special pay-

the system. The General Manager, for example, may be none the less capable and energetic than he is held to be by Mr. Potter, while his administration may be loose and feeble; for the latter proposition is but a special form of the general one that there is a breadth of field in which any amount of capacity and vigor may be dissipated.

ment of $142,100, the cost of their employment gives a rate per car per annum of $70. The following table will show the number of cars in use, and the work which hired cars assisted in performing each year since 1862:—

Year.	No. Owned.	No. Hired.	Tons per Car.	Excess of Cars. No.
1862	3001	—	232	—
1863	3061	—	222	—
1864	3332	—	not known.	—
1865	3847	not known.	not known.	—
1866	3948	323	239	298
1867	3948	787	214	791
1868	3968	459	233	407
1869	3968	692	231	465
1870	3844	2030	208	1108
1871	3807	not known.	not known.	—
1872	3837	2089	257	—

257 tons having been established in 1872 as a practicable load per car per annum, all the other years of the table show the rolling-stock to have been in excess. The Company's property four cars *more* than the number seen thus to have been necessary in 1867, but 25 cars *less* than necessary in 1866, and but 52 cars less in 1868, the employment of extra stock during those years does not appear to have been actually unavoidable. In 1869, the deficit amounted to 227 cars, the hiring to 692; and in 1870 the deficit amounting to 922 cars, the hiring amounted to 2,030. On the five years from 1866 to 1870, the insufficiency of the rolling-stock having been equal to 1,222 cars, and the hiring to 4,291, an average excess of hired cars must be held to have been employed in the working to the extent of two-thirds of all.

Each of the freight cars of the Northern of Canada moves annually 560 tons; and of the Great Western 540 tons. That 257 tons should be the best working result obtainable on the Grand Trunk becomes, under contrast with these averages, a subject of question. These several loads, however, not being assigned their several mileages, can be reduced to specific dimensions of work but by equating the carrying-payments on each in terms of distance.—The average receipts per ton on the Northern of Canada is $2; on the Great Western $2.70; and on the Grand Trunk $2.70. By an inference from this, it must be held that each freight-car of the Great Western transports for a certain distance 540 tons a year; while each freight-car of the Grand Trunk transports for a distance that ought not to be very widely different, but

257 tons a year! Circumstances arising in the great extent of the line may explain some of this apparent want of economy in the working; but whatever may be held to remain of that want, involving as it does, besides payment for hire and for repairs, an increase of "dead weight," and an addition to the cost of maintaining the track and machinery, must be held, in the case of a management which consumes gross earnings in working expenses to an extent so exceptional as 80 per cent., highly suggestive of a saving in the disposition of the cars and the arrangement of the trains. Even though it should not prove a clear gain to the net earnings to reject 20 per cent. of the tonnage, the irresistible presumption that the average load may be raised by judicious superintendence to 400 tons per car, is all that is necessary for the conclusion that the Company's business may be transacted without any car-hiring whatever.*

The management of the Grand Trunk has been arraigned here under the check of insufficiency of proof. The specifications given are, however, of the very gravest character; and require in conclusion but a summing up to place their aggregate in the form of an equivalent loss of net income. The following statement is offered as an approximation to the amount:—

On lease of	the	Atlantic and St. Lawrence, a waste of.....	$280,000
Do.	do.	Buffalo and Lake Huron, a waste of.....	100,000
Do.	do.	Detroit Junction, a waste of.....	50,000
Do.	do.	Montreal and Champlain, a waste of.....	50,000
Do.	do.	Buffalo Bridge, a waste of.....	50,000
On 2,089 hired cars, rent $142,000			
Do.	repairs 201,000†	a waste of say.....	970,000
Do.	running		
Do.	track renewals		
		Annual waste.....	$1,500,000

Violent diseases are said to require violent remedies. This review has, therefore, dealt with the case of the management vigorously; but in every instance with qualms of sympathy. The more painful part of the probing it has undertaken having now been brought to a conclusion, it proceeds to enter on the

* The average haul on the Great Western and that on the Grand Trunk are not within reach of the writer of this article. They are estimated here relatively on the basis of the average receipts per ton; but may show, in fact, that the conclusion drawn is more or less overdone.

† This amount is *pro rata* for the hired cars in the sum set forth by the Company for repairs of all cars.

less disagreeable office of the remedy—a remedy, however, that no squeamishness can be allowed to offer in a form less radical than the distemper.

The Direction has been placed at great disadvantage by its reservations. Its statements are so broad as to deprive it of the benefit of intelligent suggestion from outside. The points put, for example, in this examination are put in several instances at hazard, because of the public want of knowledge of details. The owners of the Atlantic and St. Lawrence give a specific basis for condemnation of the management of the great Canadian railway in leasing their line; in paying so extravagant a rent for it; and in working it at so extraordinary a proportion of its earnings. If these special facts had appeared on the face of the accounts of the Grand Trunk, that series of blunders would, no doubt, have found a remedy long before they had cost the stock-holders so many millions which ought to have been applied to dividends. But details being wanting in all other instances of the errors that have been glanced at in this survey, the condemnation of these errors has proceeded on but general reasons; and loses, therefore, some of the force necessary to command their correction. On these grounds, then, be it said that the first condition of bettering the fortunes of the enterprise is that of the publication of its transactions in detail.

Publicity in all its operations is a duty passing beyond the stockholders of the Grand Trunk to those other parties to the enterprise—the Canadian people. And at this point, the omission of the management in that particular constitutes a special reason for the immediate discharge of a general duty of the Government of the Dominion.—The railway is an interest of such great dimensions even now, and of such vast dimensions in the approaching future, that it requires supervision in the interest of the public. A law providing that annual reports be submitted by the several companies to Parliament, is a measure demanded for the protection of railway capital, and for the development of the country.*

* This suggestion as to railway-returns by the Government has attracted attention. Immediately after its original appearance a telegram from Ottawa to the organ of the Government in Toronto stated that the Hon. Mr. Mackenzie intended to bring down a measure for the creation of a Railway-Bureau. A subsequent despatch said that he proposed, instead, to obtain the statistics pointed out here, under the operation of a bill already in existence. I am not aware, however, that anything has been actually done in the matter yet. The right of property in ideas has been ignored so generally in the case of my

Creating a Bureau with authority to shape these reports, and to even go behind them, whenever such a course might be deemed necessary to the Companies books, such a law would not only place our railways on their merits beyond the reach of market-rigging, but would also hold those merits at a high level by restraining inflations in the balance-sheet and extravagance in the direction.

English ideas in the design, execution, and working of existing lines, are chargeable mainly with the reputation of Canadian railway-securities in the money-market. They should, therefore, be held in the interest of the Dominion, under the fullest check consistent with the rights of the stockholders. A system of reports to Parliament would be an effective form of restraint in that case; and should be provided for with that view in creating the proposed Bureau—the reports covering all new projects to the extent of their gradients, their alignments, their works, their merits; and covering existing lines to the extent of their schedules, their workings, their renewals, their leasings, their credits, their additions to capital. Besides returns showing the several heads of mileage, the earnings, the distributed cost of working, the volume of business under the several divisions, "way passengers," "through passengers," "way freights" "through freights," &c., the Bureau should be authorised to obtain statements of station-transactions, distinct reports for subdivisions of a company's business, and all other details called for in its discretion to give point to its annual criticisms on the several managements.*

Reports of the Grand Trunk obtained by law, will let in

article that I have learned to acquiesce in the trespass with perfectly good humor; but, seeing that the country may be benefitted, do so with great pleasure in the case of the Prime Minister. To withdraw him from the counsel of special interests and English and Canadian experience, I should be willing to give him even special advice on the same free terms, in the hope of placing the railway-policy of the country on a footing to attract outside capital to the construction here of lines which, based on broad principles of transportation, with gradients and lines arranged on conditions of cheap working, would prove profitable to the proprietors, while launching out boldly into the wilderness, they would serve the purpose of freight-creating settlement in all that plenitude of energy which they throw out in converting wild lands of the United States to the uses of progress.

* The reports of the companies should include specifications of their working expenses during *each month*—certainly so as to the cost of keeping the tracks clear of snow, and as to the duration of and loss caused by the interruption of traffic by reason of snow. This would dispel a general misapprehension as to the actual disadvantages of railway business in Canada, by reducing that disadvantage to exact dimensions.

some light on its working. But the fullness of knowledge proper to give the stockholders a basis of intelligent supervision of their business, cannot be obtained short of a radical change in the form of the administration. The general mode of working and accounting shuts out from them any knowledge of the "profit and loss" of the Lake Huron steamers, of the Detroit-Junction lease, of the Buffalo and Lake Huron lease, of the Buffalo-Bridge, of the Montreal and Champlain lease, of the Atlantic and St. Lawrence lease. The same methods of centralization keep the parties concerned in the dark as to the details of business on the different sections. Besides these objections to an absolute direction at the centre, a still further objection applies to it on the ground that it loses all the effects of the principle of rewards and punishments, by suppressing public competition amongst its employees. For the reasons glanced at here, the working should be parcelled out into six, seven, or eight divisions, each having an independent head, with a system of subordination shaped as far as possible on the basis of individual freedom and responsibility. Separate accounts kept by each of these bodies for its division, and for such parts of its division as might be held to constitute properly special concerns, the working of the line and the result of its several outside parts, might be brought under corrective contrast with all the advantage of that individual interest which quickens the wit and stimulates the energy of competition.

The breaking up of the centralisation at Montreal is a vital condition of the proper working of the Grand Trunk. It had better, therefore, be gone into here somewhat more at length in order to impress the reason and mode of its supercedure on the understanding of the stockholders.

Under the present system, the management in London is the fifth wheel of a coach. As that of the body subject to the sufferage of the proprietory its supervision ought not to be carried out under a delegation of authority by which it is reduced to a false pretence. It should be real, direct and intelligent, operating with its eyes virtually upon the working for which it is responsible.

Wise administration constructs its machinery on the probabilities of failings, mental or moral, amongst its agents. In giving an officer sole control of the Grand Trunk Railway, the owners of the property proceed in violation of

that principle. Where the patronage of place and purchase is so vast, an executive system shaped to meet the shortcomings of the average man is necessary in order to reduce the management to the conditions of practical wisdom.

In giving the control of 1,300 miles of railway to any individual the Board supposes the impracticable. His personal presence at the points of work being impossible, he can operate but from his office. With the facilities of ocean telegraphy he could fill that form of service just as well whether his office be in Montreal or in London. *Supervision* may be just as effective from one of those places as from another; but an *active control* one thousand or three thousand miles off—a brain in an office, acting on the business of *brain* in the field—can work but a hindrance. Whether from Montreal or from London it is, within the limits of good working, impracticable. Vigour and intellect upon the spot are the conditions proper to a vast administration. Uninformed and meddlesome as remote direction, whether from one or three thousand miles away, must be, it is but an embarrassment to present intelligence, a discouragement to present zeal. The timidity, the indifference, the langour, which it inspires in the agents of execution, constitute a vast loss in the depreciation of effect through a body so large as 8,000 men.

In placing one man here in sole control, the Grand Trunk becomes removed from the supervision of the stockholders. Whether that one be the slave as he may be, or the master as he might be, of the Directors—and this writing speaks of no particular individual—he and they are, in the nature of things, one. He—any "General Manager"—and the Board are alike put on trial at the semi-annual and annual meetings; and yet he it is who determines the scope and matter of the testimony! Appearing before the judges with his chosen facts, specifications, and explanations, he is free to mould what should be disinterested testimony above just suspicion into special-pleading defence. The mutual admiration of the Manager and the Board so common in all such modes of administration, gives point to the mockery of those pretended trials even though that mockery were not inherent in the form.

Condemnation of the centralised management comes to us in overwhelming proof with the working results—those few which a system close as any other of personal ab-

solutism, allows us to see. Even though it were not the original instigator, the one-man-management has been the strenuous advocate, of all the Board's astounding blunders—International bridges, Sarnia steamers, Buffalo and Lake Huron leases, etc., etc. If it have not created or encouraged several vampire-interests that it has permitted to fasten on the railway, it has certainly helped them to become bloated upon its life-blood. One of these it has allowed to pocket, it is said by one of the most respectable merchants of Montreal, a hundred per cent. on its use of the Grand Trunk; while the managerial autocrat at whose feet it worked, should have, and could have, garnered three-fourths of that extravagant profit for his employers in England. And so of several other interests under the eyes of that management—so many as eight others—which concur with this in showing that, in practice as well as in the nature of things, the personal absolutism here should be abolished as a fatal mistake.

The functions of a "General Manager" ought to be distributed. The divisional managements by which that may be accomplished, should be independent. To obtain the accountability proper as a check upon their independence, the managers should meet in a monthly Council under the chairmanship of an Inspector. They should make separately the purchases necessary for their respective divisions; but on tenders to be opened and dealt with by the Council. Monthly returns of work should be submitted to that body by each of its members, setting forth in addition to full statements of facts, the average cost of some unit of work, or at all events be put in a shape to present such a basis of comparison as to bring the consumption of cash, muscle, and supply in each division under the check of sharp contrasts. Every excess thus brought out, should be explained by the manager responsible; and the whole proceedings sent to the elected representatives of the business in London.*

* The transfer to London of a healthy supervision in substitution for the paralysing absolutism at Montreal, becomes possible but under the proposed system of contrasts. The writer has tested the efficiency of that mode of surveillance under circumstances which are perfectly good as an illustration of its operation.—Having employed about 1,000 men on an extensive line of works remote from settlement, he was obliged to provide them with housing and board. The fifty in each "shanty" having been placed in the charge of a "boarding boss," the consumption of provisions was so extraordinary as to show not only waste but even theft. The distance over which the operations extended too great for personal supervision, the only check possible was found to be that of a system of contrasts. Each "boarding boss" was, therefore, required to send to the office, at the end of the week, a return of his stock on

The recast contemplated here proceeds on the principle that the business of a railway-manager is out-door. It proposes to keep the chief of each division on that footing; and with that view would cut down to the smallest practicable dimensions the creation in his case of a head-quarters or a staff. Living from station to station, a room at each should usually be ample as his office, and the local telegrapher sufficient as his clerk. While considerations of working convenience might call for his presence generally at a particular point, even there he should be denied all forms of conflict with the theory that his duty is that of a ubiquitous presence.* All short-comings in that ideal, after efforts of the superior activity which the functions the Manager suppose, should be filled out by unavoidable delegations of freedom of action made under a system based on the fullest application consistent with wisdom, of the principle of individual responsibility amongst the subordinates.

Small savings in salaries may perhaps be allowed with propriety to hold the Engineering service as it now is, general. To bring its works and expenditures, however, under review of local knowledge of the practical men serving as managers, the Engineer and his transactions should be included in the *personel* and the business of the Council. All his contracts should be let by public tender to be opened and acted on by that body; and all payments for work done or material

hand. The quantities thus shown deducted from those supplied during the week, gave an average per man fed, of the consumption of flour, beef, coffee, sugar, potatoes, &c., &c., in weight and in money. Confronted by those averages (headed by those of one "boss" under the constant surveillance of a clerk) the whole were brought under review once a week, the greatest derelict dismissed upon the spot, and the others warned. A few repetitions of this brought the outlay down one-half, and gave as much control of the working as if the writer had stood in person beside each "boarding boss" from one end of the week to the other. His eyes were thus virtually upon "the bosses," arresting their dishonesty, quickening their wits, and stimulating their activity —accomplishing the results at which the machinery of any business conducted by *agents* should arrive.

* The present mode of operating from a *bureau* is intended by the method proposed to be superseded *in toto* for a system of constant service on the line. The magnate who has always found time to meddle in politics, who has always affected a corps of secretaries, who delegated his responsibility by telegraph to the actual workers, who has been able to keep but one eye on the railway-staff, because his *management* includes the directors and the stockholders, would disappear under the system contemplated. The plan of working sketched out, would strain to the utmost the mind and muscle of the chief officers who would not face the penalties of being caught napping under the tell-tale light of the monthly contrasts—would hold the whole under a surveillance which could not fail to make every individual connected with the out-door and the mechanical service, a worker earnest even to anxiety.

supplied in his case, as in all other cases, should be made but after approval by the Council.

The mechanical operations are now without check. All there depends on one man. So vast an absorber of material and wages ought to be made to work under full light. No better means presents itself for effecting this than that of competitive shops—two at least, but the more the better. The additional expenditure will be repaid by the knowledge it will give that the business is conducted *before* the stockholders; but apart from the value of proceeding on that essential principle, it may be said without any reflection whatever on the officer in charge, that that expenditure will yield large returns in the form of saving on both wage and material.

The chief of each machine shop should be included in the Council, and his returns subjected to the system of contrasts, explanations, and reports, for information of the authorities in London. Each shop should make and repair its own rolling stock, that stock to be distinguished from all others, so as to give point and reach to the contrasts.—But be the mode in which light may be let in upon the immense business of the mechanical service what it may, that light should be let in, and fully, is demanded by every consideration of sound practice.

While the Managers should be the Company's *hands*, the Inspector should be its *eyes*. His duties should be those of presiding at the Council, and of reporting to London on all excesses brought out by the contrasts in the cost of worki[illegible], &c., his reports to be made from personal investigation on the spot. He, too, should be as far as practicable an officer whose duties are on the line; but beyond the use of his eyes should have no other duty when *there*. The business should be transacted on a system of accountability from the lowest officer up to the Manager—an accountability based on corresponding freedom of action.

The Inspector should watch the course of rival railways. Changes of schedule, &c., on the part of competing lines, he should lay without delay before a call-Council. But beyond this neither he nor any one else should take notice on the part of the Grand Trunk of the endless shuffles of the American carrying-trade. The High Diplomatic Representative of tens of millions of stock who goes to International Con-

gresses of Railway tricksters on the part of the Grand Trunk, may be suspected to be, at best, a fool for his pains. But the gin-palace magnificence of his special carriage and the needless expenditure of his special train, while finding ample precedent on the other side of the Lakes, belong to the peculiar order of things which has produced those very superb people, the Goulds and the Fisks. Where the roads are individual monoplies or chess-boards for the movements of stock-jobbing knaves, a system of glitter, extravagance and chicane may be all very well. The introduction of that sort of thing into what ought to be the close and careful management of a property belonging to an honest body of small stockholders, serves to show how badly the individual centralisation of the present system of working the Grand Trunk is suited to the actual character of the Company—serves to show [illegible] the more pointedly when it is recollected that the interven[illegible] of the General Manager in American railway-intrigues, under any circumstances within the proper scope of his business, is at best a waste of money, mind and muscle.

The economy which may be effected by the reform proposed in the management, will amount to hundreds of thousands. But though it were not a dollar, though instead of an economy the result were an unproductive addition to expenditure, that change is none the less an expediency in order to bring the operations of the road under the supervision of its owners, in order to bring these operations within the conditions of sound principles of working. But the machinery proposed will, perhaps, cost considerably less than that now in existence. First-class men can be obtained for division-managers at $4,000 a year. An Inspector fully up to the level of his duties, may be had for $5,000. Any saving that may be effected on the higher salaries of the present system could be applied with advantage in obtaining *satisfied* service from officers of lower grade. If, indeed, twenty-five per cent. of the employees could, as is probable, be removed, the Company would obtain very much better service in both quality and quantity by increasing the pay of the remainder proportionately.

The mode of working suggested above, would transfer the control of the road to London. And the control thus transferred would be, unlike that now exercised in Montreal, one of an effective surveillance which would not embarrass the operations. To separate the executive service, however, from private tampering of the Directors, all communications be-

tween members of the Board and the Managers should be made through the Inspector; and, being included in the proceedings of the Council, should be held open to the examination in London of any duly authorised stockholder—all other communication between the two to be dealt with by disqualification for office.

The sketch made here of the proposed form of management is necessarily a mere outline. Inferences may, however, supply the details. One of perhaps several points omitted, had better be touched on—the relations of the office-service to that in the field. The design is to keep these as far as practicable distinct—holding the former as a mere machine of record. Of the greatest simplicity in its plan, it should be reduced severely to the exclusion of all surplusage in its dimensions. If not independent of the out-door chiefs, it should be so as far as practicable. The cheese-paring which has cut down the salaries of all the officers to rates very questionable, should hardly be allowed to apply to the extent it does amongst the clerks; but should certainly be set aside in that primarily important branch of the Company's business, the working.

But no change in the form of the management will yield full fruit if not accompanied by a change in its spirit. The ambition with which the Company entered on its work was almost as boundless as the North-West of this Continent. The exhaustion resulting has, it is true, had some effect in moderating a temper so extravagant; but has left much to be done yet to bring it within the restraints of the actual. Instead of putting itself in open hostility to the developement of this Dominion, the management is called on by every consideration of reason to accept the conclusion that, while freights outside its proper field will be transported, in any event, by lines other than the Grand Trunk, the real interests of the stockholders demand that, looking the inevitable in the face, it direct its expectations and its efforts mainly to the fullest possible development of the way-business between Sarnia and Montreal. Clipping its wings, confining itself strictly to its own proper business, rejecting all traffic that does not leave a distinct balance in the revenue account, provoking no rivalries, and expending no energy, *except on internal economy*, in guarding against them, the Direction of our great highway having undergone thus a total change of spirit, will have but to reconstruct its administration on the basis of

individual responsibility and of public accounting by divisions, to reach the highest obtainable results by carrying its reform one step farther.

No business can be conducted economically on a footing of insolvency. A penalty attaches in the management to the plaint that the Grand Trunk represents a loss of English Capital to the amount of so many millions Sterling. The parties concerned in London appear, nevertheless, to even relish that cry; for they swell the nominal amount by including in their very balance sheet £3,110,500 of a liability from which the Government of Canada has granted a release! A reversal of the insolvency thus proclaimed is, however, a necessary reform, in order to stimulate the vigilance of the proprietors in the future, and to brace the energies of the enterprise for the work of a new career. With that view, and with the further view of the moral effect upon the employees, the inflation of the Capital account ought to be reduced to the basis of cash. Eliminating the sum represented by the Canadian release, the remaining liabilities ought to be re-issued under authority of a special Act of Bankruptcy in amounts determined on the basis of their values in the market.*

The Grand Trunk Railway has been for several years virtually insolvent. A question of morality can, therefore, not be supposed to arise from a proposition to give that matter of fact the form of law. True, that giving is suggested on the condition that the rights applying under a foreclosure of the mortgages be exercised in recognition of the market values of the stocks, and with, on the other hand, the design of setting aside the obligations incurred by the stockholders through the exercise of delusions little short of the insane. The bondholders to whom the Company is in default have, however, a right to obtain possession; and their right in that case is not a whit better in morals than their further right to give back an interest in the property to other innocent sufferers who have invested money in its creation. The lessors deserve no more sympathy than is due to men checked in the continuance of despoliation under the form of a bargain *over-sharp*

* A reconstruction of the Company by the bond-holders in any indifference to those pioneers of railway development in Canada, the stockholders, would be regarded here with indignation. And wise heads in London will not forget how important to the best interests of the property is the sympathy of this Government and people. No concession as to the section below Montreal, or any other favorable legislation could be obtained under a foreclosure which did not recognise to the full amount of the market value all the present parties to the ownership.

—especially when they carry off, under the check, such a large remainder as that represented by the development of their business and the maintenance of their property during so many years of exhaustive outlay.

A new railway offers, be it repeated here, an economy of distance between Montreal and Portland, to the extent, it is said, of 60 miles. A surrender of the lease of the Atlantic and St. Lawrence would place this opportunity at the service of the Grand Trunk; and would affect thus on the sea-going business of that great line in winter—until that business be established with a much greater saving on the St. Lawrence —a saving equal to at least 60 or 70 cents a ton.

The abandonment of the present route of the Grand Trunk to Portland would carry with it much, if not all, of the Company's interest in its lines east of Montreal. The question arises, therefore, what should be done with those lines on the surrender of the lease of the Atlantic and St. Lawrence—arises, be it recollected, under circumstances demanding the boldness with which life is sometimes saved by amputation. Of the 393 miles below Montreal, the length—144 miles—between that city and Island Pond, taken at the rate of the remainder of that route to Portland, pays a profit of about five per cent. of its earnings—say $50,000 a year. The 249 miles remaining are said, with some seeming of accuracy, to absorb that surplus, if they do not encroach upon income elsewhere. The abandonment of those lines would be a grievous necessity, if a necessity it were, to not only the Company, but to the public; and this consideration makes the question one for the joint action of both. The political power being, in fact, mainly responsible for the addition of at least that part of the whole which lies east of Richmond, there is a reason in morals as well as in policy why a disposition of the Company's lines below Montreal should be practicable under an arrangement with the Government.* At a low

* In a letter to a stockholder I advised that the lines not paying expenses in winter be immediately stopped working, so that that measure of self-defence by the Company might bring up the question of lease or purchase by the Crown. The ungracious and unnecessary craft which did not make even an acknowledgment of my letter, appears to characterize the whole proceedings of the management; for not until Parliament had brought out the information had I become aware that *soon after the original publication of this pamphlet*, the Company had entered on an attempt to carry out my suggestion of an arrangement with the Government. I may add here that several circumstances make it appear possible that large stockholders in the Company may have attempted to "hedge" their original investments by association with what may be described with perhaps much truth as its jockeying interests.

rental, or by purchase at a price representing the balance left after deducting the amount of the relinquished lien from the actual cost since opening those stretches, the Crown may be induced to take them off the Company's hands in the interest of the local population, and of the completeness of its purpose in the construction of the Intercolonial. And Parliament having assisted, in that wise, the placing of the great railway of Canada on a good footing before the English public, will have done to the standing of the railway-securities of the country a service which will yield a fifty-fold return upon the expenditure in its effect upon the settlement of the lands of the Crown.

The lease of the lines below Montreal by the Government, ought to yield at least $300,000 a year. This would, it may be assumed, constitute a clear addition to income. Holding the results of reform in the working at simply the estimated saving effected by rejecting the hired cars, the measures proposed—including the sale of the Buffalo Bridge at half its cost—would yield a gross addition to net earnings in the sum of $1,800,000. One million of dollars being applicable now for interest, the income available for profits would, therefore, aggregate, under the radical treatment pointed out, about two millions eight hundred thousand. The adoption of real values reducing the total liabilities to about one-half their nominal amount, that clear profit would meet all the interest on the bonds; and going beyond to the stock preferences, would extend to the remainder of the capital in the form of at least a small return. Now that, with even its present system of management, its local traffic is increasing, its locomotives doing more work, its passenger cars carrying more passengers, its freight cars greater loads, these evidences of inherent vitality declare that the measures proposed are all that are wanting to do what cannot be done otherwise—to raise the Grand Trunk into a condition of vigorous health. That point once arrived at, the line would go on thenceforth, in an experience bought dearly, it is true, under the vigilant supervision and close economy of expectant gain, until it should reach, as it would have reached originally if its management had been different, a condition of prosperity which, superior to all future inflations of an insolvent's financiering, will hold every dollar of its stock in the enjoyment of an assured dividend.